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III. Amendments to the Drawings

Figures 3, 4 and 5 have been amended to add a wall and reference numbers 9a and 10a. As noted in the Remarks section of this response, it is respectfully submitted that no new matter has been added.

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IV. Remarks

Reexamination and reconsideration of this application is hereby requested. Claims 1, 4, and 5 are pending in the application. Claims 7 and 8 have been withdrawn from consideration. Claim 1 has been amended. Claim 2, 3 and 6 have previously been cancelled.

Specification Amendments

Prior to discussing the rejections and the references, it is believed that a brief discussion on the current form of the specification is warranted. Paragraphs [0026] – [0028] have been amended to more clarify the description of the present invention.

Paragraph [0026] has been amended to rephrase and reword the grammatically difficult last sentence in a manner consistent with the original meaning. In light of paragraphs [0027] and [0028] the amendment does not constitute new matter. *See* MPEP § 2163.07(I). More specifically, the first sentence of paragraph [0027] as originally worded, stated that coolant is distributed from the coolant distributor region 9, flows through the coolant tubes 6, is redirected by 180 degrees, and flows back to the coolant collector region 9. In addition, the first sentence of paragraph [0028] clearly states that the collector unit 8 includes separate distributor regions and collector regions. As one skilled in the art will appreciate, in order to cause the required flow through the tubes, the distributor and collector regions must be fluidly divided from one another. Therefore, the only meaningful interpretation of the last sentence of paragraph [0026], consistent with paragraphs [0027] and [0028], is to note to the reader that the broad use of the phrase *coolant collector region 9* also refers to the *included distributor*

region, which has the opposite function of the collector region. The Examiner's interpretation that this sentence merely states that whatever is called the *collector region* could equally be called a *distributor region*, without suggesting a separate distributor region having a separate function, is inconsistent with the description provided in original paragraphs [0027] and [0028] and functioning of the system itself.

Paragraph [0027] has been amended to rephrase the first sentence into two sentences in order to simplify the grammar but continue to convey that the reservoir unit 8 includes refrigerant and coolant regions that each also include separate distributor and collector regions as specified in original paragraphs [0026] and [0028]. *See* App. 10/802,194 at paragraph [0026], fourth sentence, paragraph [0028], first sentence, and Figs. 3 – 4. It is respectfully submitted that this constitutes a mere rephrasing of the passage and no new matter has been added. *See* MPEP § 2163.07(I).

Paragraph [0028] has been amended to more clearly distinguish the "collector unit 8" from the distributor and collector included therein. Therefore, the *collector unit 8* has been changed to just *unit 8*. Additionally, the *collector and distributor units* have been changed to *collector and distributor regions*, conforming with the terminology first used in paragraphs [0026] and [0027]. *See* App. 10/802,194 at paragraph [0026], fourth sentence. It is respectfully submitted that this constitutes a mere rewording of the passage and no new matter has been added. *See* MPEP § 2163.07(I).

Rejections Under 35 USC § 112

Claims 1, 4 and 5 were rejected under 35 USC §112, first paragraph, as falling to comply with the written description requirement on the basis that the amendments made

to the drawings in the prior response added new matter. Applicant respectfully traverses this rejection.

It is respectfully submitted that showing separate distributor and collector regions in the unit 8 is supported in original paragraphs [0026] – [0028] of the specification. To clarify the support provided by these paragraphs, they have been amended without adding any new matter. Paragraph [0028] now recites that FIG. 3 shows the unit 8 with separate distributor and collector regions. App. 10/802,194 at paragraph [0028]. Since the specification, drawings, and original claims as filed may be relied upon to establish a disclosure, the separate distributor and collector regions mentioned in paragraph [0028] may be relied upon to support the amendment to Figure 3, regardless of whether they relate to non-elected *claims*. *See* MPEP § 608.04.

Further support is found in paragraph [0027] which now states that "[t]he coolant in a coolant distributor region 9a [of a unit 8] is circulated into the coolant tubes 6, passes through the coolant tubes 6 thereby dissipating heat to the cellular blocks 11 in thermal contact with the coolant tubes 6 and heating the air to be heated 5. In the redirection region 14 of the coolant tubes 6 the coolant is redirected by 180° and flows in the opposite direction back to the coolant collector region 9, where the coolant is collected and passed on." Therefore, since paragraph [0028] describes the unit 8 as including *separate* collector and distributor regions, and paragraph [0027] describes the distributor region as distributing coolant into, and flowing through, the coolant tubes 6 and describes the collector region as collecting coolant flowing from the coolant tubes 6, the original disclosure clearly supports the unit 8 as having separate distribution and collection regions.

In order to have two separate regions within a chamber that permit coolant flow through tubes from one region to the other, it is inherent that the regions must be physically separated. The only means of which the Applicant is currently aware for physically separating two regions of a chamber is by including a partition or wall. If the Examiner is aware of other means to achieve operation of the system, examples of such other means is kindly requested. In the absence of such partitioning, the above described fluid flow would not be possible. Therefore, applicant respectfully submits that one skilled in the art would easily recognize that the presence of a partition dividing the interior of the unit 8 into separate distributor and collector regions is inherent based on the stated function and theory of operation of both regions. *See* MPEP § 2163.07(a). Since one skilled in the art would easily recognize that the presence of a partition is inherent in the above description, the drawings of the present application may be amended to show the presence of the partition without introducing new matter. MPEP § 2163.07(a).

Alternatively and additionally, it is also respectfully submitted that the omission of a partition from the drawings constitutes an obvious error to one skilled in the art since there is no other way to divide a chamber into separate regions having separate functions with fluid flow therebetween other than by the provision of the partition. Therefore, since one skilled in the art would easily recognize the existence of the error and the appropriate correction, the present amendment to the drawings does not constitute new matter. *See* MPEP § 2163.07(II).

Furthermore, Figs. 3 – 4 support the proposed location of the wall, since they clearly show the tubes 6 as having two connections with the bottom of the unit 8. One

connection is on the left side and one is on the right side beneath the refrigerant tubes 7. In order to divide the unit 8 into separate collector and distributor regions, where coolant can flow between the regions through the two connections, one skilled in the art would easily recognize that the partition must be provided between the two connections to vertically divide the unit 8 into the two regions.

Accordingly, for at least the above reasons, it is believed that this rejection is now moot and should be withdrawn.

Claims 1, 4 and 5 were rejected under 35 USC §112, first paragraph, as failing to comply with the enablement requirement. Applicant respectfully traverses these rejections.

Paragraph [0028] discloses a reservoir unit having separate distributor and collector regions, and paragraph [0027] discloses coolant in a coolant distributor region being circulated into coolant tubes flowing to a coolant collector region. Additionally, claim 1 has been amended to recite a unit to further clarify the method of operation of the present invention. Accordingly, it is believed that this rejection is now moot and should be withdrawn.

Claims 1, 4 and 5 were rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicant respectfully traverses these rejections.

As stated above, claim 1 has been amended to recite a reservoir unit having both distributor and collector regions. Accordingly, it is believed that this rejection is now moot and should be withdrawn.

Rejections Under 35 USC § 102(b) & 103(a)

Claims 1 and 4 were rejected under 35 USC §102(b) as being anticipated by or, in the alternative, under USC §103(a) as obvious over U.S. Patent No. 6,095,239 issued to Makino et al. (Makino). Applicant respectfully traverses these rejections.

As noted by the examiner, Makino discloses a heat exchanger having two first heat exchanger tanks 25, 27 and two circular condenser tanks 31, 33. Makino, col. 5, lines 14-24 and Figure 1. Each circular condenser tank 31, 33 is mounted along a tangential line to the *exterior* of one of the heat exchanger tank 25, 27 on a single common wall. *Id.* at Figure 1, and Figures 24-27. No portion of the circular tanks 31, 33 protrude into the interior, or is connected to any other part, of the heat exchanger tanks 25, 27 in any of the embodiments of Figures 1-45. Therefore, since the circular tanks 31, 33 do not protrude into the interior of the heat exchanger tanks 25, 27, and at most the circular tanks 31, 33 share a single common exterior wall, it is submitted that Makino fails to disclose a reservoir unit having a refrigerant collector region at least partly *surrounded* by the coolant collector region.

Turning to the embodiment of Figures 24-27 cited by the examiner, a pipe 479 is connected at one end to the condenser tank 31 (the condenser tank 31 being mounted to the exterior of the tank 25), passes through the heat exchanger tank 25, and is connected an exterior connector 473 at the other end. *Id.* at col. 11, lines 1-6 and Figures 24 and 25. The pipe 479 is clearly shown as a separate component from the circular tank 31 that neither collects or distributes fluid, but merely provides a flow path from the circular tank 31 to an exterior environment via the connector 473. From this it is submitted, in addition to the above, that the pipe 479 cannot be considered a part of

the circular tank 31 and, as above, Makino fails to disclose a reservoir unit having a refrigerant collector region at least partly *surrounded* by the coolant collector region.

For at least the above reasons, the rejection based thereon should be accordingly withdrawn.

Rejections Under 35 USC § 103

Claims 1 and 4 were rejected under 35 USC §103(a) as being unpatentable over Makino et al as applied to claims 1 and 4 above, and further in view of U.S. Patent No. 2,298,895 issued to McKibben ("McKibben").

The arguments above regarding Makino also apply to the present rejection and are herein incorporated by reference. Makino when combined with McKibben, at least fails to disclose or suggest the features lacking in Makino, namely a refrigerant collector region at least partly *surrounded* by the coolant collector region.

In that McKibben fails to disclose or suggest the features which were previously noted as being absent in Makino, it must be concluded that the combination of Makino in view of McKibben cannot render the claims of the present application as obvious. The rejection under § 103 is therefore improper and should be withdrawn.

Claim 5 was rejected under 35 USC §103(a) as being unpatentable over Makino as applied to claim 1 above, and further in view of U.S. Patent No. 3,045,979 issued to Huggins (Huggins).

The arguments above also apply to the present rejection and are herein incorporated by reference. In that Makino when combined with Huggins, at least fails to disclose or suggest the features lacking in Makino, namely a refrigerant collector region

at least partly *surrounded* by the coolant region, it must be concluded that the combination of Makino in view of Huggins cannot render the claims of the present application as obvious. The rejection under § 103 is therefore improper and should be withdrawn.

Claims 1, 4 and 5 were rejected under 35 USC §103(a) as being unpatentable over Makino or Makino/McKibben or Makino/McKibben/Huggins as applied to claims 1 and 5 above, and further in view of U.S. Publication No. 2001/0001982 (Khelifa) or U.S. Patent No. 6,810,952 issued to Ben Fredj (Ben Fredj).

The arguments above regarding Makino also apply to the present rejection and are herein incorporated by reference. In that Khelifa or Ben Fredj at least fail to disclose or suggest the features which were previously noted as being absent in Makino, namely a refrigerant collector region at least partly *surrounded* by the coolant collector region, it must be concluded that the combination of Makino in view of Khelifa or Ben Fredj cannot render the claims of the present application as obvious. The rejection under § 103 is therefore improper and should be withdrawn.

Conclusion

In view of the above amendments and remarks, it is respectfully submitted that the present form of the claims are patentably distinguishable over the art of record and that this application is now in condition for allowance. Such action is respectfully requested.

Respectfully submitted,

9/26/06
Date

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